

harness (7) for wiring inside the electronic apparatus and leading out wiring to outside the housing, wherein the harness is covered with a jacket. This assertion is respectfully traversed.

Hidetoshi merely discloses an electronic connection box composed of a relay box 3 for housing electronic components 4, and a lower case 2 to be fitted to the relay box 3. Further, the electronic parts 4 are attached in the top-face side of the relay box 3. See, e.g., Hidetoshi, paragraph [0014] and Drawing 1.

In contrast, the claimed wiring connection structure includes a "housing of the electronic apparatus in which a substrate including the electronic parts is placed," as recited in claim 3.

Nowhere does Hidetoshi disclose a substrate. Because Hidetoshi does not disclose a substrate, Hidetoshi cannot disclose a substrate including electronic parts. Thus, the claimed wiring connection structure is different from the electric connection box of Hidetoshi.

Therefore, claim 3, and claims 4 and 8 dependent therefrom, are patentable over Hidetoshi. Withdrawal of this rejection is respectfully requested.

B. Claims 1, 2 and 6

The Office Action directs claims 1, 2 and 6 under 35 U.S.C. §103(a) as allegedly being unpatentable over Hidetoshi in view of U.S. Patent No. 5,724,730 to Tanaka. This rejection is respectfully traversed.

The Office Action asserts that Hidetoshi discloses a wiring connection method for an electronic apparatus by providing a housing (2), placing a substrate with electronic parts in the housing, and providing a harness 8. The Office Action further acknowledges that Hidetoshi does not disclose integrally molding the wiring harness with the housing. However, the Office Action asserts that Tanaka remedies this deficiency. The Office Action asserts that Tanaka discloses integrally molding the wiring harness with the housing. This assertion is respectfully traversed.

Nowhere does Hidetoshi disclose "placing a substrate on which the electronic parts are mounted, in the housing," as recited in claim 1. As discussed above, Hidetoshi merely places the electronic parts on the top-face side of the relay box 3. Thus, Applicants respectfully submit that Tanaka fails to remedy the deficiency of Hidetoshi with respect to claim 1.

Further, even if Tanaka and Hidetoshi are combined, the claimed method would not be achieved. Thus, claim 1, and claims 2 and 6 dependent therefrom, would not have been rendered obvious by Hidetoshi in view of Tanaka. Withdrawal of the rejection under 35 U.S.C. §103 is thus respectfully requested.

C. Claim 9

The Office Action rejects claims 9 under 35 U.S.C. §103(a) as allegedly being unpatentable over Hidetoshi in view of Tanaka and further in view of U.S. Patent No. 5,287,894 to Shukushima et al. This rejection is respectfully traversed.

Shukushima is cited in the Office Action merely for allegedly disclosing a heat resisting tube to protect the harness during over molding. Thus, Applicants respectfully submit that Shukushima fails to remedy the deficiencies of Hidetoshi and Tanaka with respect to claim 1.

Claim 9 depends from claim 1. Thus, for at least the reasons discussed above with respect to claim 1, as well as the additional features it recites, claim 9 would not have been rendered obvious by Hidetoshi in view of Tanaka and Shukushima. Withdrawal of the rejection under 35 U.S.C. §103(a) is thus respectfully requested.

D. Claims 10, 11, 13, 14, 18, 19, 21 and 23

The Office Action rejects claims 10, 11, 13, 14, 18, 19, 21 and 23 under 35 U.S.C. §103(a) as allegedly being unpatentable over Applicants' admitted prior art (Figs. 7 and 8

(hereinafter "APA")) in view of U.S. Patent No. 6,390,854 to Yamomoto et al. This rejection is respectfully traversed.

Applicants respectfully assert that Figs. 7 and 8 do not qualify as APA. As supported by the specification, Figs. 7 and 8 are only recited as "Related Art." See, e.g., page 1. Nowhere does the specification admit that Figs. 7 and 8 are prior art made by another. As the specification clearly supports the assertions that Figs. 7 and 8 are only Related Art, Figs. 7 and 8 do not qualify as APA and the rejection must be withdrawn.

Further, Applicants respectfully assert that Yamomoto does not qualify as prior art under any section of 35 U.S.C. §102, because Applicant's priority date precedes the filing date of Yamomoto. The U.S. filing date of Yamomoto is July 13, 2001, and it was patented in the United States on May 21, 2002. However, the present application has a U.S. filing date of June 25, 2003, which is a continuation application of U.S. Patent No. 6,740,814, filed on June 10, 2002. The parent application claims priority from JP 2001-178433 filed June 13, 2001. The priority was claimed in the parent by a certified copy on July 8, 2002, and was acknowledged by the USPTO. An accurate English-language translation is filed herewith. As the instant claims are fully supported by the priority document, Yamomoto is not prior art to the instant application, and the rejection must be withdrawn.

Thus, because Figs. 7 and 8 do not qualify as APA and Yamomoto does not qualify as prior art under 35 U.S.C. §102, the rejection under 35 U.S.C. §103(a) should be withdrawn. Withdrawal of this rejection is respectfully requested.

E. Claims 12 and 15

The Office Action rejects claims 12 and 15 under 35 U.S.C. §103(a) as allegedly being unpatentable over the APA in view of Yamomoto and further in view of Shukushima. This rejection is respectfully traversed.

Shukushima is cited in the Office Action merely for allegedly disclosing a heat resisting tube to protect the harness during over molding. Thus, Applicants respectfully submit that Yamomoto and Shukushima do not remedy the deficiencies of APA with respect to claim 10.

Claims 12 and 15 depends from claim 10. Thus, for at least the reasons discussed above with respect to claim 10, as well as the additional features it recites, claims 12 and 15 would not have been rendered obvious by APA in view of Yamomoto and further in view of Shukushima. Withdrawal of this rejection is respectfully requested.

F. Claim 5

The Office Action rejects claim 5 under 35 U.S.C. §103(a) as allegedly being unpatentable over Hidetoshi in view of Tanaka and further in view of this U.S. Patent No. 6,155,871 to Machado. This rejection is respectfully traversed.

Machado is cited in the Office Action merely for allegedly disclosing a harness that is attached to the opposite end portions of the housing. Thus, Applicants respectfully submit that Machado does not remedy the deficiencies of Tanaka and Hidetoshi with respect to claim 1.

Claim 5 depends from claim 1. Thus, for at least the reasons discussed above with respect to claim 1, as well as the additional features it recites, claim 5 would not have been rendered obvious by Hidetoshi in view of Tanaka and further in view of Machado. Withdrawal of this rejection is respectfully requested.

G. Claim 7

The Office Action rejects claims 7 under 35 U.S.C. §103(a) as allegedly being patentable over Hidetoshi in view of Machado. This rejection is respectfully traversed.

Applicants respectfully submit that Machado does not remedy the deficiencies of Hidetoshi with respect to claim 3. Claim 7 depends from claim 3. Thus, for at least the

reasons discussed above with respect to claim 3, as well as the additional features it recites, claim 7 would not have been rendered obvious by Hidetoshi in view of Machado.

Withdrawal of this rejection is respectfully requested.

H. Claims 20 and 22

The Office Action rejects claims 20 and 22 under 35 U.S.C. §103(a) as allegedly being unpatentable over APA in view of Yamomoto and further in view of Machado.¹ This rejection is respectfully requested.

Applicants submit that Machado and Yamomoto do not remedy the deficiency of the APA with respect claim 13. Claims 20 and 22 depend from claim 13. Thus, for at least the reasons discussed above with respect to claim 13, as well as the additional features it recites, claims 20 and 22 would not have been rendered obvious by APA in view of Yamomoto and Machado. Withdrawal of the rejection is respectfully traversed.

II. Conclusion

In view of the foregoing, it is respectfully submitted that this application is in condition for allowance. Favorable reconsideration and prompt allowance of claims 1-23 are earnestly solicited.

¹ The Office Action indicates claims 22 and 22 are rejected. Applicants contacted Examiner Gilman who indicated that claims 20 and 22 are rejected.

Should the Examiner believe that anything further would be desirable in order to place this application in even better condition for allowance, the Examiner is invited to contact the undersigned at the telephone number set forth below.

Respectfully submitted,



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Attachment:
English Translation of JP 2001-178433

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[Fig. 1]

(A) Appearance view illustrating a wiring connection structure for an electronic apparatus to outside according to a first embodiment of the present invention

[Fig. 2]

(B) Cross-sectional view illustrating the wiring connection structure for an electronic apparatus to the outside according to the first embodiment of the present invention, taken along a line B-B' in Fig. 1

[Fig. 3]

(C) Explanatory cross-sectional view illustrating steps of a wiring connection method for an electronic apparatus to the outside according to the first embodiment of the present invention

(a) Welding step of connecting the bus bar and the harness

(b) Step of placing the bus bar and the harness connected in the housing

(c) Step of insert molding the bus bar and the harness by filling resin into the housing

(d) Step of mounting the electric circuit substrate portion in the housing and soldering the bus bar with the circuit pattern of the electric circuit substrate portion

[Fig. 4]

(D) Cross-sectional view illustrating a wiring connection structure for an electronic apparatus to outside according to a second embodiment of the present invention

[Fig. 5]

(E) Explanatory cross-sectional view illustrating the steps of a wiring connection method for an electronic apparatus to the outside according to the second embodiment of the present invention

(a) Step of welding the bus bar and the harness

(b) Step of placing the bus bar in the housing in a state where the bus bar and the harness are welded

(c) Step of insert molding the bus bar having the harness welded by filling resin into the housing

(d) Step of mounting the electric circuit substrate portion in the housing and soldering the bus bar with the circuit pattern of the electric circuit substrate portion, and step of molding by pouring resin into the welded portion between the bus bar and the harness

[Fig. 6]

(F) Cross-sectional view illustrating a wiring connection structure for an electronic apparatus to outside according to a third embodiment of the present invention

(a) Cross-sectional perspective view

(b) Cross-sectional view

[Fig. 7]

(G) Appearance view illustrating a conventional wiring connection structure for an electronic apparatus to outside

[Fig. 8]

(H) Cross-sectional view illustrating a conventional wiring connection structure for an electronic apparatus to the outside, taken along a line A-A' in Fig. 7